

WHAT IS CLAIMED IS:

1. A prism used in a system configured to capture image data representative of biometric data, comprising:

a non-planar first portion that is symmetrical about an axis of symmetry of the prism and is configured to receive a portion of a body of a user; and

a substantially planar second portion coupled an angle with respect to the non-planar first portion.

2. The prism of claim 1, wherein the first portion comprises radial sections coupled at predetermined angles with respect to each other.

3. The prism of claim 1, wherein the first portion comprises a conical shape.

4. The prism of claim 1, further comprising a cavity defined between the first portion and the second portion.

5. The prism of claim 4, further comprising a medium held within the cavity, the medium including one of a fluid, a liquid, a gel, and a gas.

6. The prism of claim 4, further comprising a medium held within the cavity, the medium having a same refractive index as the prism.

7. The prism of claim 1, further comprising a cylindrical opening running from the first portion to the second portion along the axis of symmetry, wherein the cylindrical opening is configured to receive a light source whose light beams are totally internally reflected from an inside surface of the first portion, such that they exit through the second portion.

8. The prism of claim 1, wherein an outside surface of the first portion comprises a protective coating.

9. The prism of claim 1, wherein the prism is manufactured from at least one of acrylic, glass, plastic, colored material, and clear material.

10. The prism of claim 9, wherein the colored material is the same color as a light source being used.

11. The prism of claim 1, wherein the first portion comprises a curved shape.

12. The prism of claim 1, wherein the first portion comprises a spherical shape.

13. The prism of claim 1, wherein the first portion comprises a target section configured to be captured along with the biometric data and configured to be used for calibrating the biometric data during output of the biometric data.

14. The prism of claim 1, further comprising a positioning device extending from the first portion and configured to be used to ensure the portion of body of the user is properly placed on the first portion.

15. The prism of claim 1, wherein the portion of the body of the user comprises one of one hand or two hands.

16. The prism of claim 1, further comprising a cylindrical opening running from the first portion to the second portion along the axis of symmetry, wherein the cylindrical opening includes a chamfered edge configured to receive light from a light source whose light beams are totally internally reflected from an inside surface of the first portion, such that they exit through the second portion.

17. The prism of claim 1, wherein an intersection of the first portion and the second portion comprises a chamfered edge configured to receive light from a light source whose light beams are totally internally reflected from an inside surface of the first portion, such that they exit through the second portion.

18. The prism of claim 1, wherein:
the first portion comprises an input face and a platen face; and
the second portion comprises an exit face

19. The prism of claim 18, wherein:
the input face is configured to receive therethrough light from a light source;

the platen face has a first surface configured to receive the portion of the body of the user and a second surface configured to totally internally reflect the light from the light source; and

the light that has been totally internally reflected from the platen face exits the prism via the exit face.

20. The prism of claim 18, wherein a first surface of the platen face is curved, such that the portion of the body of the user wraps around the first surface in a curve directed that extends generally along a direction of the curve.

21. The prism of claim 18, wherein a surface area of the platen face is larger than a surface area of the exit face.

22. A prism configured to be used in a system for capturing image data representative of biometric data, comprising:

- an input portion configured to receive light from a light source;
- a non-planar platen portion that is symmetrical about an axis of symmetry of the prism, the platen portion being configured to receive a portion of a body of a user on a first surface and configured to totally internally reflect the light from the light source off a second surface; and
- a exit portion configured to pass the light that has been totally internally reflected from the second surface of the platen portion onto a detector that is configured to perform the capturing of the image data.

23. A prism configured to be used in a system for capturing image data representative of biometric data, comprising:

- a non-planar first portion symmetrical about an axis of symmetry of the prism, the first portion being configured to receive a portion of a body of a user on a first surface and configured to totally internally reflect illumination from a second surface; and
- a non-planar second portion symmetrical about the axis of symmetry of the prism and coupled to the first portion, the second portion being configured to pass light that has been totally internally reflected from the second surface of the first portion onto a detector that is configured to perform the capturing of the image data.

24. The prism of claim 23, wherein the first and second portions are multi-faceted.

25. The prism of claim 23, wherein the first and second portions comprise multiple discrete sections coupled together, such that the first and second surfaces are a multi-faceted.